AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-19. (Canceled)

20. (New) A method for configuring a preamble of a packet in a transmitter of a wireless local area network system, the preamble including a first preamble, the method comprising:

generating a plurality of first symbols by repeating the first symbol 16 times; and

generating a second symbol which is 180°-phased with respect to the first symbol,

wherein the first preamble includes the plurality of first symbols and the second symbol subsequent to the plurality of first symbols.

21. (New) The method of claim 20, wherein the first symbol is generated using a sequence composed of +1 and -1

22. (New) The method of claim 20, wherein the preamble further includes a second preamble subsequent to the first preamble, and

the second preamble is used for channel estimation.

23. (New) The method of claim 22, wherein the second preamble includes a third symbol, a fourth symbol, and a fifth symbol, and

a length of the third symbol is equal to a length of the fourth symbol.

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24. (New) The method of claim 23, wherein a length of fifth symbol is shorter than the length of third symbol.

25. (New) The method of claim 23, wherein the third symbol, the fourth symbol, and the fifth symbol are generated using a sequence composed of +1 and -1

26. (New) The method of claim 22, wherein the preamble is used for frequency offset estimation.

27. (New) The method of claim 22, wherein the preamble is used for synchronization.

28. (New) A method for receiving a preamble of a packet in a receiver of a wireless local area network system, the preamble including a first preamble, the method comprising:

receiving the preamble; and

using the preamble for synchronization,

wherein the first preamble includes a plurality of first symbols and a second symbol subsequent to the plurality of first symbols,

the first symbol is repeated 16 times in the plurality of first symbols, and

the second symbol is 180°-phased with respect to the first symbol

29. (New) The method of claim 28, wherein the first symbol is generated using a sequence composed of +1 and -1

30. (New) The method of claim 28, wherein the preamble further includes a second

preamble subsequent to the first preamble, and

the second preamble is used for channel estimation.

31. (New) The method of claim 30, wherein the second preamble includes a third symbol, a fourth symbol, and a fifth symbol, and

a length of the third symbol is equal to a length of the fourth symbol.

32. (New) The method of claim 31, wherein a length of fifth symbol is shorter than the length of third symbol.

33. (New) The method of claim 32, wherein the third symbol, the fourth symbol, and the fifth symbol are generated using a sequence composed of +1 and -1

34. (New) The method of claim 30, wherein the preamble is used for frequency offset estimation.

35. (New) A method for receiving a preamble of a packet in a receiver of a wireless local area network system, the preamble including a first preamble, the method comprising:

receiving the packet; and

detecting the preamble from the packet,

wherein the first preamble includes a plurality of first symbols and a second symbol subsequent to the plurality of first symbols,

the first symbol is repeated 16 times in the plurality of first symbols, and

the second symbol is 180°-phased with respect to the first symbol

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36. (New) The method of claim 35, wherein the first symbol is generated using a sequence composed of +1 and -1

37. (New) The method of claim 35, wherein the preamble further includes a second preamble subsequent to the first preamble, and

the second preamble is used for channel estimation.

38. (New) The method of claim 35, wherein the second preamble includes a third symbol, a fourth symbol, and a fifth symbol, and

a length of the third symbol is equal to a length of the fourth symbol.

39. (New) The method of claim 38, wherein a length of fifth symbol is shorter than the length of third symbol.

40. (New) A transmitter of a wireless local area network system for configuring a preamble of a packet, the preamble including a short preamble, the transmitter comprising:

means for generating a plurality of first symbols by repeating the first symbol 16 times; and

means for generating a second symbol which is 180°-phased with respect to the first symbol,

wherein the short preamble includes the plurality of first symbols and the second symbol subsequent to the plurality of first symbols.

41. (New) A receiver of a wireless local area network system for receiving a preamble of a packet, the preamble including a short preamble, the receiver comprising:

means for receiving the preamble; and

means for using the preamble for synchronization,

wherein the short preamble includes a plurality of first symbols and a second symbol subsequent to the plurality of first symbols,

the first symbol is repeated 16 times in the plurality of first symbols, and

the second symbol is 180°-phased with respect to the first symbol.